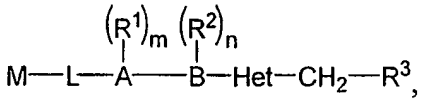
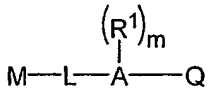
WHAT IS CLAIMED IS:

1. A process for preparing a compound having the formula:



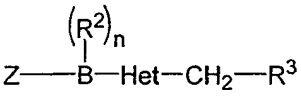
the process comprising the steps of:

combining a compound of formula (I):



(I)

with a compound of formula (II):



(II)

in a solvent in the presence of a base and a palladium catalyst, wherein

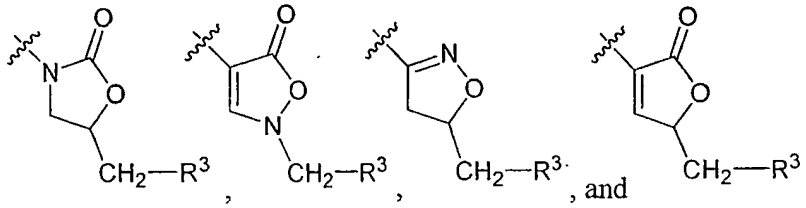
A is selected from the group consisting of:

phenyl, pyridyl, pyrazinyl, pyrimidinyl, and pyridazinyl;

B is selected from the group consisting of:

phenyl, pyridyl, pyrazinyl, pyrimidinyl, and pyridazinyl;

Het-CH_2-R^3 is selected from the group consisting of:



, and

M-L is selected from the group consisting of:

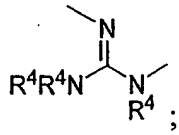
a) M-X, b) M-L^1, c) M-L^1-X, d) M-X-L^2, e) M-L^1-X-L^2, f) M-X-L^1-X-L^2,

g) M-L^1-X-L^2-X, h) M-X-X-, i) M-L^1-X-X-, j) M-X-X-L^2, and

k) M-L^1-X-X-L^2, wherein

X, at each occurrence, independently is selected from the group consisting of:

a) -O-, b) -NR^4-, c) –N(O)-, d) –N(OR^4)-, e) -$S(O)_p$-, f) -SO_2NR^4-, g) -NR^4SO_2-, h) -NR^4-N=, i) =N-NR^4-, j) -O-N=, k) =N-O-, l) -N=, m) =N-, n) -NR^4-NR^4-, o) -$NR^4C(O)O$-, p) -$OC(O)NR^4$-, q) -$NR^4C(O)NR^4$- r) -$NR^4C(NR^4)NR^4$-, and s)



;

L^1 is selected from the group consisting of:

a) C_{1-6} alkyl, b) C_{2-6} alkenyl, and c) C_{2-6} alkynyl,

wherein any of a) – c) optionally is substituted with one or more R^5 groups; and

L^2 is selected from the group consisting of:

a) C_{1-6} alkyl, b) C_{2-6} alkenyl, and c) C_{2-6} alkynyl,

wherein any of a) – c) optionally is substituted with one or more R^5 groups;

alternatively, L in M-L is a bond;

M is selected from the group consisting of:

a) C_{3-14} saturated, unsaturated, or aromatic carbocycle, b) 3-14 membered saturated, unsaturated, or aromatic heterocycle containing one or more heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur, c) C_{1-6} alkyl, d) C_{2-6} alkenyl, e) C_{2-6} alkynyl, and f) –CN,

wherein any of a) – e) optionally is substituted with one or more R^5 groups;

Q is a borane having the formula $-BY_2$, wherein

Y, at each occurrence, independently is selected from the group consisting of:

a) –OH, b) -OC_{1-6} alkyl, c) -OC_{2-6} alkenyl, d) -OC_{2-6} alkynyl, e) -OC_{1-14} saturated, unsaturated, or aromatic carbocycle, f) C_{1-6} alkyl, g) C_{2-}

$_6$ alkenyl, h) C_{2-6} alkynyl, and i) C_{1-14} saturated, unsaturated, or aromatic carbocycle,

wherein any of b) – i) optionally is substituted with one or more halogens;

alternatively, two Y groups taken together comprise a chemical moiety selected from the group consisting of:

a) $-OC(R^4)(R^4)C(R^4)(R^4)O-$, and b) $-OC(R^4)(R^4)CH_2C(R^4)(R^4)O-$;

alternatively, Q is a BF_3 alkali metal salt or 9-borabicyclo[3.3.1]nonane;

Z is selected from the group consisting of:

a) I, b) Br, c) Cl, and d) R^9OSO_3-;

R^1, at each occurrence, independently is selected from the group consisting of:

a) F, b) Cl, c) Br, d) I, e) $-CF_3$, f) $-OR^4$, g) -CN, h) $-NO_2$, i) $-NR^4R^4$, j) $-C(O)R^4$, k) $-C(O)OR^4$, l) $-OC(O)R^4$, m) $-C(O)NR^4R^4$, n) $-NR^4C(O)R^4$, o) $-OC(O)NR^4R^4$, p) $-NR^4C(O)OR^4$, q) $-NR^4C(O)NR^4R^4$, r) $-C(S)R^4$, s) $-C(S)OR^4$, t) $-OC(S)R^4$, u) $-C(S)NR^4R^4$, v) $-NR^4C(S)R^4$, w) $-OC(S)NR^4R^4$, x) $-NR^4C(S)OR^4$, y) $-NR^4C(S)NR^4R^4$, z) $-C(NR^4)R^4$, aa) $-C(NR^4)OR^4$, bb) $-OC(NR^4)R^4$, cc) $-C(NR^4)NR^4R^4$, dd) $-NR^4C(NR^4)R^4$, ee) $-OC(NR^4)NR^4R^4$, ff) $-NR^4C(NR^4)OR^4$, gg) $-NR^4C(NR^4)NR^4R^4$, hh) $-S(O)_pR^4$, ii) $-SO_2NR^4R^4$, and jj) R^4;

R^2, at each occurrence, independently is selected from the group consisting of:

a) F, b) Cl, c) Br, d) I, e) $-CF_3$, f) $-OR^4$, g) -CN, h) $-NO_2$, i) $-NR^4R^4$, j) $-C(O)R^4$, k) $-C(O)OR^4$, l) $-OC(O)R^4$, m) $-C(O)NR^4R^4$, n) $-NR^4C(O)R^4$, o) $-OC(O)NR^4R^4$, p) $-NR^4C(O)OR^4$, q) $-NR^4C(O)NR^4R^4$, r) $-C(S)R^4$, s) $-C(S)OR^4$, t) $-OC(S)R^4$, u) $-C(S)NR^4R^4$, v) $-NR^4C(S)R^4$, w) $-OC(S)NR^4R^4$, x) $-NR^4C(S)OR^4$, y) $-NR^4C(S)NR^4R^4$, z) $-C(NR^4)R^4$, aa) $-C(NR^4)OR^4$, bb) $-OC(NR^4)R^4$, cc) $-C(NR^4)NR^4R^4$, dd) $-NR^4C(NR^4)R^4$, ee) $-OC(NR^4)NR^4R^4$, ff) $-NR^4C(NR^4)OR^4$, gg) $-NR^4C(NR^4)NR^4R^4$, hh) $-S(O)_pR^4$, ii) $-SO_2NR^4R^4$, and jj) R^4;

R^3 is selected from the group consisting of:

a) $-OR^4$, b) $-NR^4R^4$, c) $-C(O)R^4$, d) $-C(O)OR^4$, e) $-OC(O)R^4$, f) $-C(O)NR^4R^4$, g) $-NR^4C(O)R^4$, h) $-OC(O)NR^4R^4$, i) $-NR^4C(O)OR^4$, j) $-NR^4C(O)NR^4R^4$,

k) -C(S)R^4, l) -C(S)OR^4, m) -OC(S)R^4, n) -C(S)NR^4R^4, o) –NR^4C(S)R^4, p) -OC(S)NR^4R^4, q) –NR^4C(S)OR^4, r) –NR^4C(S)NR^4R^4, s) -C(NR^4)R^4, t) -C(NR^4)OR^4, u) -OC(NR^4)R^4, v) -C(NR^4)NR^4R^4, w) –NR^4C(NR^4)R^4, x) -OC(NR^4)NR^4R^4, y) -NR^4C(NR^4)OR^4, z) –NR^4C(NR^4)NR^4R^4, aa) -S(O)$_p$$R^4$, bb) -$SO_2NR^4R^4$, and cc) R^4;

R^4, at each occurrence, independently is selected from the group consisting of:

a) H, b) –OR^6, c) an amine protecting group, d) C_{1-6} alkyl, e) C_{2-6} alkenyl, f) C_{2-6} alkynyl, g) C_{3-14} saturated, unsaturated, or aromatic carbocycle, h) 3-14 membered saturated, unsaturated, or aromatic heterocycle comprising one or more heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur, i) -C(O)-C_{1-6} alkyl, j) -C(O)-C_{2-6} alkenyl, k) –C(O)-C_{2-6} alkynyl, l) -C(O)-C_{3-14} saturated, unsaturated, or aromatic carbocycle, m) -C(O)-3-14 membered saturated, unsaturated, or aromatic heterocycle comprising one or more heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur, n) -C(O)O-C_{1-6} alkyl, o) -C(O)O-C_{2-6} alkenyl, p) -C(O)O-C_{2-6} alkynyl, q) -C(O)O-C_{3-14} saturated, unsaturated, or aromatic carbocycle, and r) -C(O)O-3-14 membered saturated, unsaturated, or aromatic heterocycle comprising one or more heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur,

wherein any of d) – r) optionally is substituted with one or more R^5 groups;

R^5, at each occurrence, is independently selected from the group consisting of:

a) F, b) Cl, c) Br, d) I, e) =O, f) =S, g) =NR^6, h) =NOR^6, i) =N-NR^6R^6, j) -CF_3, k) –OR^6, l) -CN, m) -NO_2, n) –NR^6R^6, o) -C(O)R^6, p) -C(O)OR^6, q) -OC(O)R^6, r) -C(O)NR^6R^6, s) –NR^6C(O)R^6, t) -OC(O)NR^6R^6, u) -NR^6C(O)OR^6, v) -NR^6C(O)NR^6R^6, w) -C(S)R^6, x) -C(S)OR^6, y) -OC(S)R^6, z) -C(S)NR^6R^6, aa) -NR^6C(S)R^6, bb) -OC(S)NR^6R^6, cc) -NR^6C(S)OR^6, dd) –NR^6C(S)NR^6R^6, ee) -C(NR^6)R^6, ff) -C(NR^6)OR^6, gg) -OC(NR^6)R^6, hh) -C(NR^6)NR^6R^6, ii) -NR^6C(NR^6)R^6, jj) -OC(NR^6)NR^6R^6, kk) –NR^6C(NR^6)OR^6, ll) -NR^6C(NR^6)NR^6R^6, mm) -S(O)$_p$$R^6$, nn) -$SO_2NR^6R^6$, and oo) R^6;

R^6, at each occurrence, independently is selected from the group consisting of:

a) H, b) –OR^8, c) an amine protecting group, d) C_{1-6} alkyl, e) C_{2-6} alkenyl, f) C_{2-6} alkynyl, g) C_{3-14} saturated, unsaturated, or aromatic carbocycle,

h) 3-14 membered saturated, unsaturated, or aromatic heterocycle comprising one or more heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur, i) -C(O)-C_{1-6} alkyl, j) -C(O)-C_{2-6} alkenyl, k) –C(O)-C_{2-6} alkynyl, l) -C(O)-C_{3-14} saturated, unsaturated, or aromatic carbocycle, m) -C(O)-3-14 membered saturated, unsaturated, or aromatic heterocycle comprising one or more heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur, n) -C(O)O-C_{1-6} alkyl, o) -C(O)O-C_{2-6} alkenyl, p) -C(O)O-C_{2-6} alkynyl, q) -C(O)O-C_{3-14} saturated, unsaturated, or aromatic carbocycle, and r) -C(O)O-3-14 membered saturated, unsaturated, or aromatic heterocycle comprising one or more heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur,

wherein any of d) – r) optionally is substituted with one or more R^7 groups;

R^7, at each occurrence, independently is selected from the group consisting of:

a) F, b) Cl, c) Br, d) I, e) =O, f) =S, g) =NR^8, h) =NOR^8, i) =N-NR^8R^8, j) -CF_3, k) –OR^8, l) -CN, m) -NO_2, n) –NR^8R^8, o) -$C(O)R^8$, p) -$C(O)OR^8$, q) -$OC(O)R^8$, r) -$C(O)NR^8R^8$, s) –$NR^8C(O)R^8$, t) -$OC(O)NR^8R^8$, u) -$NR^8C(O)OR^8$, v) -$NR^8C(O)NR^8R^8$, w) -$C(S)R^8$, x) -$C(S)OR^8$, y) -$OC(S)R^8$, z) -$C(S)NR^8R^8$, aa) -$NR^8C(S)R^8$, bb) -$OC(S)NR^8R^8$, cc) -$NR^8C(S)OR^8$, dd) –$NR^8C(S)NR^8R^8$, ee) -$C(NR^8)R^8$, ff) -$C(NR^8)OR^8$, gg) -$OC(NR^8)R^8$, hh) -$C(NR^8)NR^8R^8$, ii) -$NR^8C(NR^8)R^8$, jj) -$OC(NR^8)NR^8R^8$, kk) –$NR^8C(NR^8)OR^8$, ll) -$NR^8C(NR^8)NR^8R^8$, mm) -$S(O)_pR^8$, nn) -$SO_2NR^8R^8$, oo) C_{1-6} alkyl, pp) C_{2-6} alkenyl, qq) C_{2-6} alkynyl, rr) C_{3-14} saturated, unsaturated, or aromatic carbocycle, and ss) 3-14 membered saturated, unsaturated, or aromatic heterocycle comprising one or more heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur,

wherein any of oo) – ss) optionally is substituted with one or more moieties selected from the group consisting of R^8, F, Cl, Br, I, -CF_3, –OR^8, –SR^8, -CN, -NO_2, –NR^8R^8, -$C(O)R^8$, -$C(O)OR^8$, -$OC(O)R^8$, -$C(O)NR^8R^8$, -$NR^8C(O)R^8$, -$OC(O)NR^8R^8$, –$NR^8C(O)OR^8$, -$NR^8C(O)NR^8R^8$, -$C(S)R^8$, -$C(S)OR^8$, -$OC(S)R^8$, -$C(S)NR^8R^8$, -$NR^8C(S)R^8$, -$OC(S)NR^8R^8$, -$NR^8C(S)OR^8$, –$NR^8C(S)NR^8R^8$, -$C(NR^8)R^8$, -$C(NR^8)OR^8$, -$OC(NR^8)R^8$, -$C(NR^8)NR^8R^8$, -$NR^8C(NR^8)R^8$, -$OC(NR^8)NR^8R^8$, –$NR^8C(NR^8)OR^8$, -$NR^8C(NR^8)NR^8R^8$, -$SO_2NR^8R^8$, and-$S(O)_pR^8$;

R^8, at each occurrence, independently is selected from the group consisting of:

a) H, b) an amine protecting group, c) C_{1-6} alkyl, d) C_{2-6} alkenyl, e) C_{2-6} alkynyl, f) C_{3-14} saturated, unsaturated, or aromatic carbocycle, g) 3-14 membered saturated, unsaturated, or aromatic heterocycle comprising one or more heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur, h) -C(O)-C_{1-6} alkyl, i) -C(O)-C_{2-6} alkenyl, j) –C(O)-C_{2-6} alkynyl, k) -C(O)-C_{3-14} saturated, unsaturated, or aromatic carbocycle, l) -C(O)-3-14 membered saturated, unsaturated, or aromatic heterocycle comprising one or more heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur, m) -C(O)O-C_{1-6} alkyl, n) -C(O)O-C_{2-6} alkenyl, o) -C(O)O-C_{2-6} alkynyl, p) -C(O)O-C_{3-14} saturated, unsaturated, or aromatic carbocycle, and q) -C(O)O-3-14 membered saturated, unsaturated, or aromatic heterocycle comprising one or more heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur,

wherein any of c) – q) optionally is substituted with one or more moieties selected from the group consisting of F, Cl, Br, I, $-CF_3$, -OH, $-OC_{1-6}$ alkyl, -SH, $-SC_{1-6}$ alkyl, -CN, $-NO_2$, $-NH_2$, $-NHC_{1-6}$ alkyl, $-N(C_{1-6}\text{ alkyl})_2$, $-C(O)C_{1-6}$ alkyl, $-C(O)OC_{1-6}$ alkyl, $-C(O)NH_2$, $-C(O)NHC_{1-6}$ alkyl, $-C(O)N(C_{1-6}\text{ alkyl})_2$, $-NHC(O)C_{1-6}$ alkyl, $-SO_2NH_2$-, $-SO_2NHC_{1-6}$ alkyl, $-SO_2N(C_{1-6}\text{ alkyl})_2$, and $-S(O)_pC_{1-6}$ alkyl;

R^9 is selected from the group consisting of:

a) C_{1-6} alkyl, b) phenyl, and c) toluyl;

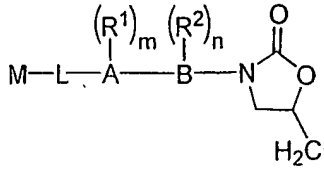
wherein any of a) - c) optionally is substituted with one or more moieties selected from the group consisting of F, Cl, Br, and I;

m is 0, 1, 2, 3, or 4;

n is 0, 1, 2, 3, or 4; and

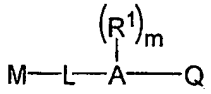
p, at each occurrence, independently is 0, 1, or 2.

2. A process for preparing a compound having the formula:



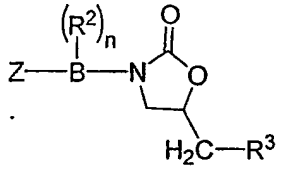
the process comprising the steps of:

combining a compound of formula (I):



(I)

with a compound of formula (II):

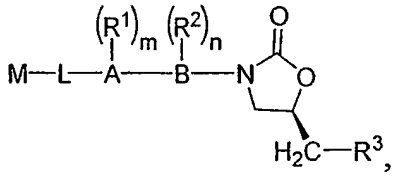


(II)

in a solvent in the presence of a base and a palladium catalyst,

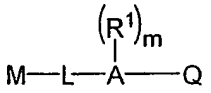
wherein A, B, L, M, R^1, R^2, R^3, Q, Z, m, and n are defined as described in claim 1.

3. A process for preparing a compound having the formula:



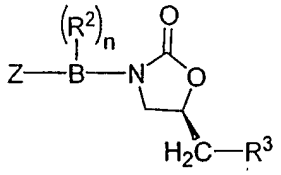
the process comprising the steps of:

combining a compound of formula (I):



(I)

with a compound of formula (II):



(II)

in a solvent in the presence of a base and a palladium catalyst,

wherein A, B, L, M, R^1, R^2, R^3, Q, Z, m, and n are defined as described in claim 1.

4. The process according to any one of claims 1-3, wherein

A is selected from the group consisting of phenyl and pyridyl;

B is selected from the group consisting of phenyl and pyridyl;

m is 0, 1, or 2; and

n is 0, 1, or 2.

5. The process according to any one of claims 1-4, wherein R^3 is $-NHC(O)R^4$.

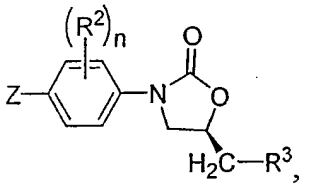
6. The process according to claim 5, wherein R^4 is $-CH_3$.

7. The process according to any one of claims 1-4, wherein R^3 is selected from the group consisting of triazole, tetrazole, oxazole, and isoxazole.

8. The process according to claim 7, wherein R^3 is triazole.

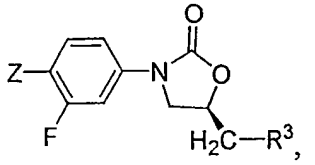
9. The process according to claim 8, wherein R^3 is [1,2,3]triazol-1-yl.

10. The process according to any one of claims 1-4, wherein compound (II) has the formula:



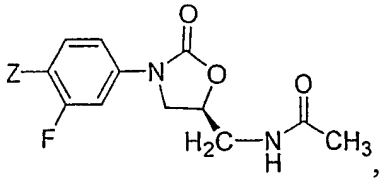
wherein R^2, R^3, Z, and n are defined as described in claim 1.

11. The process according to claim 10, wherein compound (II) has the formula:



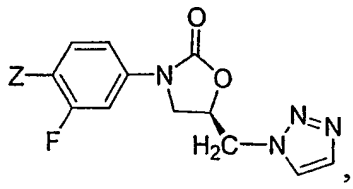
wherein Z and R^3 are defined as described in claim 1.

12. The process according to claim 11, wherein compound (II) has the formula:



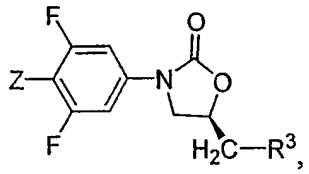
wherein Z is defined as described in claim 1.

13. The process according to claim 11, wherein compound (II) has the formula:



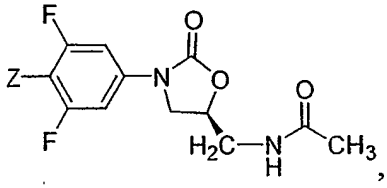
wherein Z is defined as described in claim 1.

14. The process according to claim 10, wherein compound (II) has the formula:



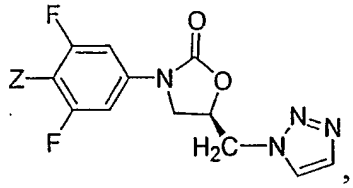
wherein Z and R^3 are defined as described in claim 1.

15. The process according to claim 14, wherein compound (II) has the formula:



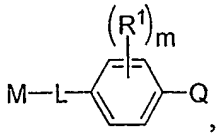
wherein Z is defined as described in claim 1.

16. The process according to claim 14, wherein compound (II) has the formula:



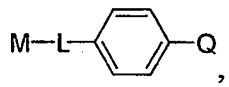
wherein Z is defined as described in claim 1.

17. The process according to any one of claims 1-16, wherein compound (I) has the formula:



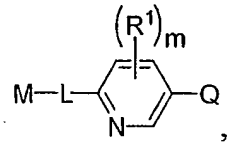
wherein L, M, Q, R^1, and m are defined as described in claim 1.

18. The process according to claim 17, wherein compound (I) has the formula:



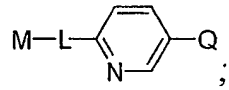
wherein L, M, and Q, are defined as described in claim 1.

19. The process according to any one of claims 1-16, wherein compound (I) has the formula:



wherein L, M, Q, R^1, and m are defined as described in claim 1.

20. The process according to claim 19, wherein compound (I) has the formula:



wherein L, M, and Q, are defined as described in claim 1.

21. The process according to any one of claims 1-20, wherein M-L is M-CH_2-X-CH_2-.

22. The process according to claim 21, wherein X is –NR^4-.

23. The process according to claim 22, wherein R^4 is H.

24. The process according to claim 22, wherein R^4 is an amine protecting group.

25. The process according to claim 24, wherein the amine protecting group is selected from the group consisting of:

a) benzyl, b) *t*-butyldimethylsilyl, c) *t*-butdyldiphenylsilyl, d) *t*-butyloxycarbonyl, e) *p*-methoxybenzyl, f) methoxymethyl, g) tosyl, h) trifluoroacetyl, i) trimethylsilyl, j) fluorenyl-methyloxycarbonyl, k) 2-trimethylsilyl-ethyoxycarbonyl, l) 1-methyl-1-(4-biphenylyl)ethoxycarbonyl, m) allyloxycarbonyl, and n) benzyloxycarbonyl.

26. The process according to claim 24, further comprising the step of removing the amine protecting group.

27. The process according to any one of claims 1-20, wherein

M-L is M-S-L^1-NR^4- L^2;

L^1 is C_{1-6} alkyl; and

L^2 is C_{1-6} alkyl.

28. The process according to claim 27, wherein M-L is:

M-S–CH_2CH_2-NH-CH_2-.

29. The process according to any one of claims 1-20, wherein L is C_{1-6} alkyl.

30. The process according to claim 29, wherein L is -CH_2-.

31. The process according to any one of claims 21-30, wherein M comprises a 5-6 membered saturated, unsaturated, or aromatic heterocycle comprising one or more heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur.

32. The process according to claim 31, wherein M is selected from the group consisting of triazole, tetrazole, oxazole, and isoxazole.

33. The process according to claim 32, wherein M is isoxazol-4-yl.

34. The process according to claim 32, wherein M is [1,2,3]triazol-1-yl.

35. The process according to claim 32, wherein M is [1,2,3]triazol-4-yl.

36. The process according to any one of claims 1-20, wherein M-L is M-X-CH_2-.

37. The process according to claim 36, wherein X is –NR^4-.

38. The process according to claim 37, wherein R^4 is H.

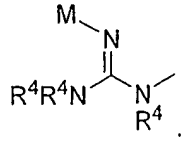
39. The process according to claim 37, wherein R^4 is an amine protecting group.

40. The process according to claim 39, wherein the amine protecting group is selected from the group consisting of:

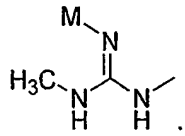
a) benzyl, b) *t*-butyldimethylsilyl, c) *t*-butdyldiphenylsilyl, d) *t*-butyloxycarbonyl, e) *p*-methoxybenzyl, f) methoxymethyl, g) tosyl, h) trifluoroacetyl, i) trimethylsilyl, j) fluorenyl-methyloxycarbonyl, k) 2-trimethylsilyl-ethyoxycarbonyl, l) 1-methyl-1-(4-biphenylyl)ethoxycarbonyl, m) allyloxycarbonyl, and n) benzyloxycarbonyl.

41. The process according to claim 39, further comprising the step of removing the amine protecting group.

42. The process according any one of claims 1-20, wherein M-X is:



43. The process according to claim 42, wherein M-X is:



44. The process according to any one of claims 36-43, wherein M is selected from the group consisting of:

a) C_{1-6} alkyl, b) C_{2-6} alkenyl, c) C_{2-6} alkynyl, and d) –CN,

wherein

i) any of a) – c) is substituted with one or more moieties selected from the group consisting of F, Cl, Br, I, and -CN; and

ii) any of a) – c) optionally is further substituted with one or more R^5 groups.

45. The process according to claim 44, wherein M is C_{1-6} alkyl substituted with one or more atoms selected from the group consisting of F, Cl, Br, and I.

46. The process according to claim 45, wherein M is $-CH_2CH_2CH_2F$.

47. The process according to claim 44, wherein M is $-CH_2CH(OH)CH_2F$.

48. The process according to claim 44, wherein M is C_{1-6} alkyl substituted with one or more –CN groups.

49. The process according to claim 48, wherein M is $-CH_2CH_2CN$.

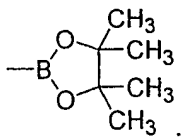
50 The process according to claim 44, wherein M is $-CH_2C(O)NH_2$.

51. The process according to any one of claims 1-50, wherein Z is selected from the group consisting of I, trifluoromethanesulfonate, and *p*-toluenesulfonate.

52. The process according to claim 51, wherein Z is I.

53. The process according to any one of claims 1-52, wherein Q is $-B(OH)_2$.

54. The process according to any one of claims 1-52, wherein Q is:



55. The process according to any one of claims 1-52, wherein Q is $-BF_2 \cdot KF$.

56. The process according to any one of claims 1-55, wherein the base is selected from the group consisting of alkali metal hydroxides, alkali metal carbonates, alkali metal fluorides, trialkyl amines, and mixtures thereof.

57. The process according to claim 56, wherein the base is selected from the group consisting of potassium carbonate, sodium carbonate, sodium methoxide, sodium ethoxide, potassium fluoride, triethylamine, diisopropylethylamine, and mixtures thereof.

58. The process according to claim 57, wherein the base is potassium carbonate.

59. The process according to claim 56, wherein the ratio of equivalents of base to equivalents of compound (I) is about 3:1.

60. The process according to any one of claims 1-59, wherein the palladium catalyst is a ligand coordinated palladium (0) catalyst.

61. The process according to claim 60, wherein the palladium catalyst is a tetrakis (trialkylphosphine) palladium (0) or a tetrakis(triarylphosphine) palladium (0) catalyst.

62. The process according to claim 61, wherein the palladium catalyst is tetrakis(triphenylphosphine) palladium (0).

63. The process according to claim 62, wherein the ratio of the equivalents of tetrakis(triphenylphosphine) palladium (0) to the equivalents of compound (I) is about 1:20.

64. The process according to any one of claims 1-63, wherein the solvent comprises an aqueous solvent.

65. The process according to any one of claims 1-63, wherein the solvent comprises a mixture of water and an organic solvent, wherein the organic solvent is selected from the group consisting of:

a) methanol, b) ethanol, c) propanol, d) isopropanol, e) butanol, f) isobutanol, g) secondary butanol, h) tertiary butanol, i) benzene, j) toluene, k) tetrahydrofuran, l) dimethylformamide, m) 1,2-diethyl ether, n) dimethoxyethane, o) diisopropyl ether, p) methyltertiarybutyl ether, q) methoxymethyl ether, r) 2-methoxyethyl ether, s) 1,4-dioxane, and t) 1,3-dioxolane, and mixtures thereof.

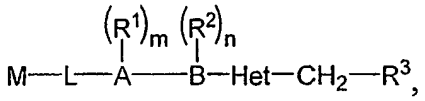
66. The process according to claim 65 wherein the solvent comprises a mixture of water, toluene, and ethanol.

67. The process according to claim 66 wherein the solvent comprises a mixture of water, toluene, and ethanol in a ratio of about 1:3:1 by volume.

68. The process according to any one of claims 1-67, wherein the process is carried out at a temperature between about 20 °C and about 100 °C.

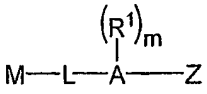
69. The process according to any one of claims 1-67, wherein the process is carried out at the reflux temperature of the solvent.

70. A process for preparing a compound having the formula:



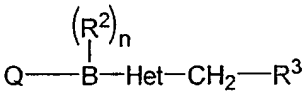
the process comprising the steps of:

combining a compound of formula (I):



(I)

with a compound of formula (II):



(II)

in a solvent in the presence of a base and a palladium catalyst, wherein

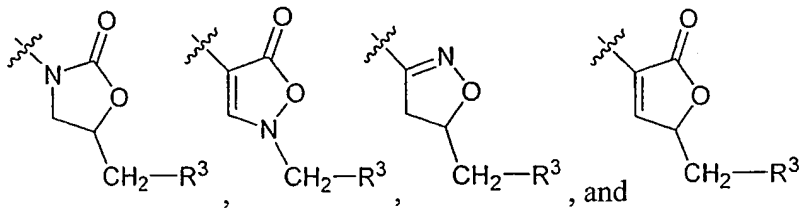
A is selected from the group consisting of:

phenyl, pyridyl, pyrazinyl, pyrimidinyl, and pyridazinyl;

B is selected from the group consisting of:

phenyl, pyridyl, pyrazinyl, pyrimidinyl, and pyridazinyl;

Het-CH_2-R^3 is selected from the group consisting of:

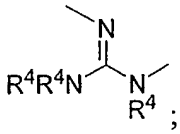


M-L is selected from the group consisting of:

a) M-X, b) M-L^1, c) M-L^1-X, d) M-X-L^2, e) M-L^1-X-L^2, f) M-X-L^1-X-L^2, g) M-L^1-X-L^2-X, h) M-X-X-, i) M-L^1-X-X-, j) M-X-X-L^2, and k) M-L^1-X-X-L^2, wherein

X, at each occurrence, independently is selected from the group consisting of:

a) -O-, b) -NR^4-, c) –N(O)-, d) –N(OR^4)-, e) -$S(O)_p$-, f) -SO_2NR^4-, g) -NR^4SO_2-, h) -NR^4-N=, i) =N-NR^4-, j) -O-N=, k) =N-O-, l) -N=, m) =N-, n) -NR^4-NR^4-, o) -$NR^4C(O)O$-, p) -$OC(O)NR^4$-, q) -$NR^4C(O)NR^4$- r) -$NR^4C(NR^4)NR^4$-, and s)



;

L^1 is selected from the group consisting of:

a) C_{1-6} alkyl, b) C_{2-6} alkenyl, and c) C_{2-6} alkynyl,

wherein any of a) – c) optionally is substituted with one or more R^5 groups; and

L^2 is selected from the group consisting of:

a) C_{1-6} alkyl, b) C_{2-6} alkenyl, and c) C_{2-6} alkynyl,

wherein any of a) – c) optionally is substituted with one or more R^5 groups;

alternatively, L in M-L is a bond;

M is selected from the group consisting of:

a) C_{3-14} saturated, unsaturated, or aromatic carbocycle, b) 3-14 membered saturated, unsaturated, or aromatic heterocycle containing one or more heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur, c) C_{1-6} alkyl, d) C_{2-6} alkenyl, e) C_{2-6} alkynyl, and f) –CN,

wherein any of a) – e) optionally is substituted with one or more R^5 groups;

Q is a borane having the formula –BY_2, wherein

Y, at each occurrence, independently is selected from the group consisting of:

a) –OH, b) -OC_{1-6} alkyl, c) –OC_{2-6} alkenyl, d) –OC_{2-6} alkynyl, e) -OC_{1-14} saturated, unsaturated, or aromatic carbocycle, f) C_{1-6} alkyl, g) C_{2-6} alkenyl, h) C_{2-6} alkynyl, and i) C_{1-14} saturated, unsaturated, or aromatic carbocycle,

wherein any of b) – i) optionally is substituted with one or more halogens;

alternatively, two Y groups taken together comprise a chemical moiety selected from the group consisting of:

a) -$OC(R^4)(R^4)C(R^4)(R^4)O$-, and b) -$OC(R^4)(R^4)CH_2C(R^4)(R^4)O$-;

alternatively, Q is a BF_3 alkali metal salt or 9-borabicyclo[3.3.1]nonane;

Z is selected from the group consisting of:

a) I, b) Br, c) Cl, and d) R^9OSO_3-;

R^1, at each occurrence, independently is selected from the group consisting of:

a) F, b) Cl, c) Br, d) I, e) -CF_3, f) –OR^4, g) -CN, h) -NO_2, i) -NR^4R^4, j) -$C(O)R^4$, k) -$C(O)OR^4$, l) -$OC(O)R^4$, m) -$C(O)NR^4R^4$, n) -$NR^4C(O)R^4$, o) -$OC(O)NR^4R^4$, p) –$NR^4C(O)OR^4$, q) –$NR^4C(O)NR^4R^4$, r) -$C(S)R^4$, s) -$C(S)OR^4$, t) -$OC(S)R^4$, u) -$C(S)NR^4R^4$, v) –$NR^4C(S)R^4$, w) -$OC(S)NR^4R^4$, x) –$NR^4C(S)OR^4$, y) -$NR^4C(S)NR^4R^4$, z) -$C(NR^4)R^4$, aa) -$C(NR^4)OR^4$, bb) -$OC(NR^4)R^4$, cc) -$C(NR^4)NR^4R^4$, dd) –$NR^4C(NR^4)R^4$, ee) -$OC(NR^4)NR^4R^4$, ff) -$NR^4C(NR^4)OR^4$, gg) -$NR^4C(NR^4)NR^4R^4$, hh) -$S(O)_pR^4$, ii) -$SO_2NR^4R^4$, and jj) R^4;

R^2, at each occurrence, independently is selected from the group consisting of:

a) F, b) Cl, c) Br, d) I, e) -CF_3, f) –OR^4, g) -CN, h) -NO_2, i) -NR^4R^4, j) -$C(O)R^4$, k) -$C(O)OR^4$, l) -$OC(O)R^4$, m) -$C(O)NR^4R^4$, n) -$NR^4C(O)R^4$, o) -$OC(O)NR^4R^4$, p) –$NR^4C(O)OR^4$, q) –$NR^4C(O)NR^4R^4$, r) -$C(S)R^4$, s) -$C(S)OR^4$, t) -$OC(S)R^4$, u) -$C(S)NR^4R^4$, v) –$NR^4C(S)R^4$, w) -$OC(S)NR^4R^4$, x) –$NR^4C(S)OR^4$, y) -$NR^4C(S)NR^4R^4$, z) -$C(NR^4)R^4$, aa) -$C(NR^4)OR^4$, bb) -$OC(NR^4)R^4$, cc) -$C(NR^4)NR^4R^4$, dd) –$NR^4C(NR^4)R^4$, ee) -$OC(NR^4)NR^4R^4$, ff) -$NR^4C(NR^4)OR^4$, gg) -$NR^4C(NR^4)NR^4R^4$, hh) -$S(O)_pR^4$, ii) -$SO_2NR^4R^4$, and jj) R^4;

R^3 is selected from the group consisting of:

a) $-OR^4$, b) $-NR^4R^4$, c) $-C(O)R^4$, d) $-C(O)OR^4$, e) $-OC(O)R^4$, f) $-C(O)NR^4R^4$, g) $-NR^4C(O)R^4$, h) $-OC(O)NR^4R^4$, i) $-NR^4C(O)OR^4$, j) $-NR^4C(O)NR^4R^4$, k) $-C(S)R^4$, l) $-C(S)OR^4$, m) $-OC(S)R^4$, n) $-C(S)NR^4R^4$, o) $-NR^4C(S)R^4$, p) $-OC(S)NR^4R^4$, q) $-NR^4C(S)OR^4$, r) $-NR^4C(S)NR^4R^4$, s) $-C(NR^4)R^4$, t) $-C(NR^4)OR^4$, u) $-OC(NR^4)R^4$, v) $-C(NR^4)NR^4R^4$, w) $-NR^4C(NR^4)R^4$, x) $-OC(NR^4)NR^4R^4$, y) $-NR^4C(NR^4)OR^4$, z) $-NR^4C(NR^4)NR^4R^4$, aa) $-S(O)_pR^4$, bb) $-SO_2NR^4R^4$, and cc) R^4;

R^4, at each occurrence, independently is selected from the group consisting of:

a) H, b) $-OR^6$, c) an amine protecting group, d) C_{1-6} alkyl, e) C_{2-6} alkenyl, f) C_{2-6} alkynyl, g) C_{3-14} saturated, unsaturated, or aromatic carbocycle, h) 3-14 membered saturated, unsaturated, or aromatic heterocycle comprising one or more heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur, i) $-C(O)-C_{1-6}$ alkyl, j) $-C(O)-C_{2-6}$ alkenyl, k) $-C(O)-C_{2-6}$ alkynyl, l) $-C(O)-C_{3-14}$ saturated, unsaturated, or aromatic carbocycle, m) -C(O)-3-14 membered saturated, unsaturated, or aromatic heterocycle comprising one or more heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur, n) $-C(O)O-C_{1-6}$ alkyl, o) $-C(O)O-C_{2-6}$ alkenyl, p) $-C(O)O-C_{2-6}$ alkynyl, q) $-C(O)O-C_{3-14}$ saturated, unsaturated, or aromatic carbocycle, and r) -C(O)O-3-14 membered saturated, unsaturated, or aromatic heterocycle comprising one or more heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur,

wherein any of d) – r) optionally is substituted with one or more R^5 groups;

R^5, at each occurrence, is independently selected from the group consisting of:

a) F, b) Cl, c) Br, d) I, e) =O, f) =S, g) $=NR^6$, h) $=NOR^6$, i) $=N-NR^6R^6$, j) $-CF_3$, k) $-OR^6$, l) -CN, m) $-NO_2$, n) $-NR^6R^6$, o) $-C(O)R^6$, p) $-C(O)OR^6$, q) $-OC(O)R^6$, r) $-C(O)NR^6R^6$, s) $-NR^6C(O)R^6$, t) $-OC(O)NR^6R^6$, u) $-NR^6C(O)OR^6$, v) $-NR^6C(O)NR^6R^6$, w) $-C(S)R^6$, x) $-C(S)OR^6$, y) $-OC(S)R^6$, z) $-C(S)NR^6R^6$, aa) $-NR^6C(S)R^6$, bb) $-OC(S)NR^6R^6$, cc) $-NR^6C(S)OR^6$, dd) $-NR^6C(S)NR^6R^6$, ee) $-C(NR^6)R^6$, ff) $-C(NR^6)OR^6$, gg) $-OC(NR^6)R^6$, hh) $-C(NR^6)NR^6R^6$,

ii) -$NR^6C(NR^6)R^6$, jj) -$OC(NR^6)NR^6R^6$, kk) –$NR^6C(NR^6)OR^6$,
ll) -$NR^6C(NR^6)NR^6R^6$, mm) -$S(O)_pR^6$, nn) -$SO_2NR^6R^6$, and oo) R^6;

R^6, at each occurrence, independently is selected from the group consisting of:
a) H, b) –OR^8, c) an amine protecting group, d) C_{1-6} alkyl, e) C_{2-6} alkenyl,
f) C_{2-6} alkynyl, g) C_{3-14} saturated, unsaturated, or aromatic carbocycle,
h) 3-14 membered saturated, unsaturated, or aromatic heterocycle comprising one or more heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur, i) -C(O)-C_{1-6} alkyl, j) -C(O)-C_{2-6} alkenyl, k) –C(O)-C_{2-6} alkynyl,
l) -C(O)-C_{3-14} saturated, unsaturated, or aromatic carbocycle,
m) -C(O)-3-14 membered saturated, unsaturated, or aromatic heterocycle comprising one or more heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur, n) -C(O)O-C_{1-6} alkyl, o) -C(O)O-C_{2-6} alkenyl,
p) -C(O)O-C_{2-6} alkynyl, q) -C(O)O-C_{3-14} saturated, unsaturated, or aromatic carbocycle, and r) -C(O)O-3-14 membered saturated, unsaturated, or aromatic heterocycle comprising one or more heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur,
wherein any of d) – r) optionally is substituted with one or more R^7 groups;

R^7, at each occurrence, independently is selected from the group consisting of:
a) F, b) Cl, c) Br, d) I, e) =O, f) =S, g) =NR^8, h) =NOR^8, i) =N-NR^8R^8, j) -CF_3,
k) –OR^8, l) -CN, m) -NO_2, n) –NR^8R^8, o) -$C(O)R^8$, p) -$C(O)OR^8$, q) -$OC(O)R^8$,
r) -$C(O)NR^8R^8$, s) –$NR^8C(O)R^8$, t) -$OC(O)NR^8R^8$, u) -$NR^8C(O)OR^8$,
v) -$NR^8C(O)NR^8R^8$, w) -$C(S)R^8$, x) -$C(S)OR^8$, y) -$OC(S)R^8$, z) -$C(S)NR^8R^8$,
aa) -$NR^8C(S)R^8$, bb) -$OC(S)NR^8R^8$, cc) -$NR^8C(S)OR^8$, dd) –$NR^8C(S)NR^8R^8$,
ee) -$C(NR^8)R^8$, ff) -$C(NR^8)OR^8$, gg) -$OC(NR^8)R^8$, hh) -$C(NR^8)NR^8R^8$,
ii) -$NR^8C(NR^8)R^8$, jj) -$OC(NR^8)NR^8R^8$, kk) –$NR^8C(NR^8)OR^8$,
ll) -$NR^8C(NR^8)NR^8R^8$, mm) -$S(O)_pR^8$, nn) -$SO_2NR^8R^8$, oo) C_{1-6} alkyl,
pp) C_{2-6} alkenyl, qq) C_{2-6} alkynyl, rr) C_{3-14} saturated, unsaturated, or aromatic carbocycle, and ss) 3-14 membered saturated, unsaturated, or aromatic heterocycle comprising one or more heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur,

wherein any of oo) – ss) optionally is substituted with one or more moieties selected from the group consisting of R^8, F, Cl, Br, I, $-CF_3$, $-OR^8$, $-SR^8$, -CN, $-NO_2$, $-NR^8R^8$, $-C(O)R^8$, $-C(O)OR^8$, $-OC(O)R^8$, $-C(O)NR^8R^8$, $-NR^8C(O)R^8$, $-OC(O)NR^8R^8$, $-NR^8C(O)OR^8$, $-NR^8C(O)NR^8R^8$, $-C(S)R^8$, $-C(S)OR^8$, $-OC(S)R^8$, $-C(S)NR^8R^8$, $-NR^8C(S)R^8$, $-OC(S)NR^8R^8$, $-NR^8C(S)OR^8$, $-NR^8C(S)NR^8R^8$, $-C(NR^8)R^8$, $-C(NR^8)OR^8$, $-OC(NR^8)R^8$, $-C(NR^8)NR^8R^8$, $-NR^8C(NR^8)R^8$, $-OC(NR^8)NR^8R^8$, $-NR^8C(NR^8)OR^8$, $-NR^8C(NR^8)NR^8R^8$, $-SO_2NR^8R^8$, and $-S(O)_pR^8$;

R^8, at each occurrence, independently is selected from the group consisting of:

a) H, b) an amine protecting group, c) C_{1-6} alkyl, d) C_{2-6} alkenyl, e) C_{2-6} alkynyl, f) C_{3-14} saturated, unsaturated, or aromatic carbocycle, g) 3-14 membered saturated, unsaturated, or aromatic heterocycle comprising one or more heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur, h) $-C(O)-C_{1-6}$ alkyl, i) $-C(O)-C_{2-6}$ alkenyl, j) $-C(O)-C_{2-6}$ alkynyl, k) $-C(O)-C_{3-14}$ saturated, unsaturated, or aromatic carbocycle, l) -C(O)-3-14 membered saturated, unsaturated, or aromatic heterocycle comprising one or more heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur, m) $-C(O)O-C_{1-6}$ alkyl, n) $-C(O)O-C_{2-6}$ alkenyl, o) $-C(O)O-C_{2-6}$ alkynyl, p) $-C(O)O-C_{3-14}$ saturated, unsaturated, or aromatic carbocycle, and q) -C(O)O-3-14 membered saturated, unsaturated, or aromatic heterocycle comprising one or more heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur,

wherein any of c) – q) optionally is substituted with one or more moieties selected from the group consisting of F, Cl, Br, I, $-CF_3$, -OH, $-OC_{1-6}$ alkyl, -SH, $-SC_{1-6}$ alkyl, -CN, $-NO_2$, $-NH_2$, $-NHC_{1-6}$ alkyl, $-N(C_{1-6}$ alkyl$)_2$, $-C(O)C_{1-6}$ alkyl, $-C(O)OC_{1-6}$ alkyl, $-C(O)NH_2$, $-C(O)NHC_{1-6}$ alkyl, $-C(O)N(C_{1-6}$ alkyl$)_2$, $-NHC(O)C_{1-6}$ alkyl, $-SO_2NH_2$-, $-SO_2NHC_{1-6}$ alkyl, $-SO_2N(C_{1-6}$ alkyl$)_2$, and $-S(O)_pC_{1-6}$ alkyl;

R^9 is selected from the group consisting of:

a) C_{1-6} alkyl, b) phenyl, and c) toluyl;

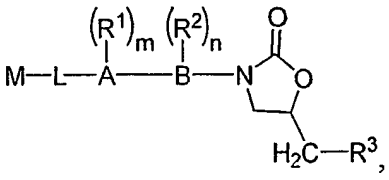
wherein any of a) - c) optionally is substituted with one or more moieties selected from the group consisting of F, Cl, Br, and I;

m is 0, 1, 2, 3, or 4;

n is 0, 1, 2, 3, or 4; and

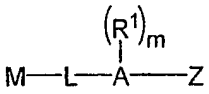
p, at each occurrence, independently is 0, 1, or 2.

71. A process for preparing a compound having the formula:



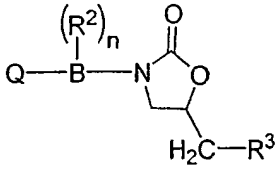
the process comprising the steps of:

combining a compound of formula (I):



(I)

with a compound of formula (II):

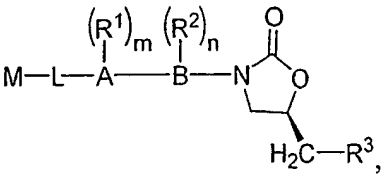


(II)

in a solvent in the presence of a base and a palladium catalyst,

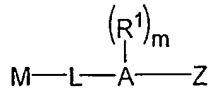
wherein A, B, L, M, R^1, R^2, R^3, Q, Z, m, and n are defined as described in claim 70.

72. A process for preparing a compound having the formula:



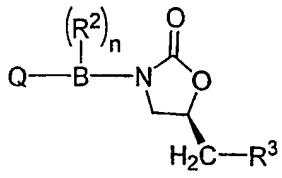
the process comprising the steps of:

combining a compound of formula (I):



(I)

with a compound of formula (II):



(II)

in a solvent in the presence of a base and a palladium catalyst,

wherein A, B, L, M, R^1, R^2, R^3, Q, Z, m, and n are defined as described in claim 70.

73. The process according to any one of claims 70-72, wherein

A is selected from the group consisting of phenyl and pyridyl;

B is selected from the group consisting of phenyl and pyridyl;

m is 0, 1, or 2; and

n is 0, 1, or 2.

74. The process according to any one of claims 70-73, wherein R^3 is $-NHC(O)R^4$.

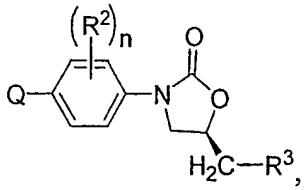
75. The process according to claim 74, wherein R^4 is $-CH_3$.

76. The process according to any one of claims 70-73, wherein R^3 is selected from the group consisting of triazole, tetrazole, oxazole, and isoxazole.

77. The process according to claim 76, wherein R^3 is triazole.

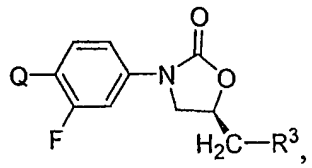
78. The process according to claim 77, wherein R^3 is [1,2,3]triazol-1-yl.

79. The process according to any one of claims 70-73, wherein compound (II) has the formula:



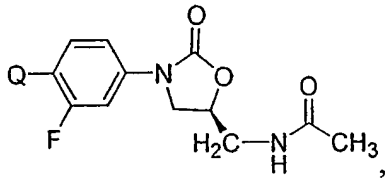
wherein R^2, R^3, Q, and n are defined as described in claim 70.

80. The process according to claim 79, wherein compound (II) has the formula:



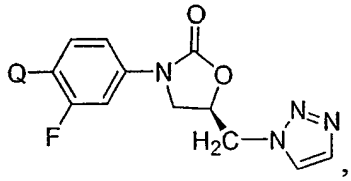
wherein Q and R^3 are defined as described in claim 70.

81. The process according to claim 80, wherein compound (II) has the formula:



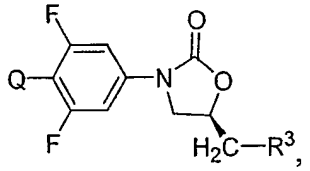
wherein Q is defined as described in claim 70.

82. The process according to claim 80, wherein compound (II) has the formula:



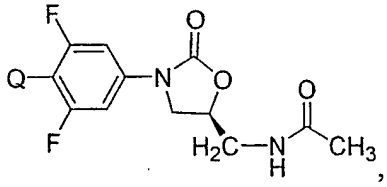
wherein Q is defined as described in claim 70.

83. The process according to claim 79, wherein compound (II) has the formula:



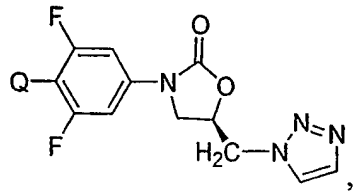
wherein Q and R^3 are defined as described in claim 70.

84. The process according to claim 83, wherein compound (II) has the formula:



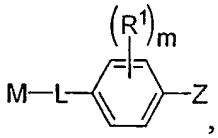
wherein Q is defined as described in claim 70.

85. The process according to claim 83, wherein compound (II) has the formula:



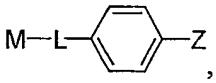
wherein Q is defined as described in claim 70.

86. The process according to any one of claims 70-85, wherein compound (I) has the formula:



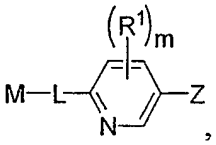
wherein L, M, R^1, Z, and m are defined as described in claim 70.

87. The process according to claim 86, wherein compound (I) has the formula:



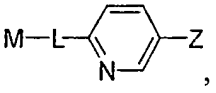
wherein L, M, and Z are defined as described in claim 70.

88. The process according to any one of claims 70-85, wherein compound (I) has the formula:



wherein L, M, R^1, Z, and m are defined as described in claim 70.

89. The process according to claim 88, wherein compound (I) has the formula:



wherein L, M, and Z are defined as described in claim 70.

90. The process according to any one of claims 70-89, wherein M-L is M-CH_2-X-CH_2-.

91. The process according to claim 90, wherein X is –NR^4-.

92. The process according to claim 91, wherein R^4 is H.

93. The process according to claim 91, wherein R^4 is an amine protecting group.

94. The process according to claim 93, wherein the amine protecting group is selected from the group consisting of:

a) benzyl, b) *t*-butyldimethylsilyl, c) *t*-butdyldiphenylsilyl, d) *t*-butyloxycarbonyl, e) *p*-methoxybenzyl, f) methoxymethyl, g) tosyl, h) trifluoroacetyl, i) trimethylsilyl, j) fluorenyl-methyloxycarbonyl, k) 2-trimethylsilyl-ethyoxycarbonyl, l) 1-methyl-1-(4-biphenylyl)ethoxycarbonyl, m) allyloxycarbonyl, and n) benzyloxycarbonyl.

95. The process according to claim 93, further comprising the step of removing the amine protecting group.

96. The process according to any one of claims 70-89, wherein

M-L is M-S-L^1-NR^4- L^2;

L^1 is C_{1-6} alkyl; and

L^2 is C_{1-6} alkyl.

97. The process according to claim 96, wherein M-L is:

M-S–CH_2CH_2-NH-CH_2-.

98. The process according to any one of claims 70-89, wherein L is C_{1-6} alkyl.

99. The process according to claim 98, wherein L is -CH_2-.

100. The process according to any one of claims 90-99, wherein M comprises a 5-6 membered saturated, unsaturated, or aromatic heterocycle comprising one or more heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur.

101. The process according to claim 100, wherein M is selected from the group consisting of triazole, tetrazole, oxazole, and isoxazole.

102. The process according to claim 101, wherein M is isoxazol-4-yl.

103. The process according to claim 101, wherein M is [1,2,3]triazol-1-yl.

104. The process according to claim 101, wherein M is [1,2,3]triazol-4-yl.

105. The process according to any one of claims 70-89, wherein M-L is M-X-CH_2-.

106. The process according to claim 105, wherein X is –NR^4-.

107. The process according to claim 106, wherein R^4 is H.

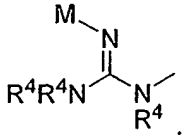
108. The process according to claim 106, wherein R^4 is an amine protecting group.

109. The process according to claim 108, wherein the amine protecting group is selected from the group consisting of:

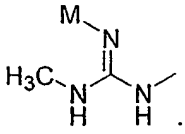
a) benzyl, b) *t*-butyldimethylsilyl, c) *t*-butdyldiphenylsilyl, d) *t*-butyloxycarbonyl, e) *p*-methoxybenzyl, f) methoxymethyl, g) tosyl, h) trifluoroacetyl, i) trimethylsilyl, j) fluorenyl-methyloxycarbonyl, k) 2-trimethylsilyl-ethyoxycarbonyl, l) 1-methyl-1-(4-biphenylyl)ethoxycarbonyl, m) allyloxycarbonyl, and n) benzyloxycarbonyl.

110. The process according to claim 108, further comprising the step of removing the amine protecting group.

111. The process according any one of claims 70-89, wherein M-X is:



112. The process according to claim 111, wherein M-X is:



113. The process according to any one of claims 105-112, wherein M is selected from the group consisting of:

a) C_{1-6} alkyl, b) C_{2-6} alkenyl, c) C_{2-6} alkynyl, and d) –CN,

wherein

i) any of a) – c) is substituted with one or more moieties selected from the group consisting of F, Cl, Br, I, and -CN; and

ii) any of a) – c) optionally is further substituted with one or more R^5 groups.

114. The process according to claim 113, wherein M is C_{1-6} alkyl substituted with one or more atoms selected from the group consisting of F, Cl, Br, and I.

115. The process according to claim 114, wherein M is $-CH_2CH_2CH_2F$.

116. The process according to claim 113, wherein M is $-CH_2CH(OH)CH_2F$.

117. The process according to claim 113, wherein M is C_{1-6} alkyl substituted with one or more –CN groups.

118. The process according to claim 117, wherein M is $-CH_2CH_2CN$.

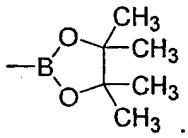
119. The process according to claim 113, wherein M is $-CH_2C(O)NH_2$.

120. The process according to any one of claims 70-119, wherein Z is selected from the group consisting of I, trifluoromethanesulfonate, and *p*-toluenesulfonate.

121. The process according to claim 120, wherein Z is I.

122. The process according to any one of claims 70-121, wherein Q is $-B(OH)_2$.

123. The process according to any one of claims 70-121, wherein Q is:



.

124. The process according to any one of claims 70-121, wherein Q is $-BF_2 \cdot KF$.

125. The process according to any one of claims 70-124, wherein the base is selected from the group consisting of alkali metal hydroxides, alkali metal carbonates, alkali metal fluorides, trialkyl amines, and mixtures thereof.

126. The process according to claim 125, wherein the base is selected from the group consisting of potassium carbonate, sodium carbonate, sodium methoxide, sodium ethoxide, potassium fluoride, triethylamine, diisopropylethylamine, and mixtures thereof.

127. The process according to claim 126, wherein the base is potassium carbonate.

128. The process according to claim 125, wherein the ratio of equivalents of base to equivalents of compound (I) is about 3:1.

129. The process according to any one of claims 70-128, wherein the palladium catalyst is a ligand coordinated palladium (0) catalyst.

130. The process according to claim 129, wherein the palladium catalyst is a tetrakis (trialkylphosphine) palladium (0) or a tetrakis(triarylphosphine) palladium (0) catalyst.

131. The process according to claim 130, wherein the palladium catalyst is tetrakis(triphenylphosphine) palladium (0).

132. The process according to claim 131, wherein the ratio of the equivalents of tetrakis(triphenylphosphine) palladium (0) to the equivalents of compound (I) is about 1:20.

133. The process according to any one of claims 70-132, wherein the solvent comprises an aqueous solvent.

134. The process according to any one of claims 70-132, wherein the solvent comprises a mixture of water and an organic solvent, wherein the organic solvent is selected from the group consisting of:

a) methanol, b) ethanol, c) propanol, d) isopropanol, e) butanol, f) isobutanol, g) secondary butanol, h) tertiary butanol, i) benzene, j) toluene, k) tetrahydrofuran, l) dimethylformamide, m) 1,2-diethyl ether, n) dimethoxyethane, o) diisopropyl ether, p) methyltertiarybutyl ether, q) methoxymethyl ether, r) 2-methoxyethyl ether, s) 1,4-dioxane, and t) 1,3-dioxolane, and mixtures thereof.

135. The process according to claim 134 wherein the solvent comprises a mixture of water, toluene, and ethanol.

136. The process according to claim 135 wherein the solvent comprises a mixture of water, toluene, and ethanol in a ratio of about 1:3:1 by volume.

137. The process according to any one of claims 70-136, wherein the process is carried out at a temperature between about 20 °C and about 100 °C.

138. The process according to any one of claims 70-136, wherein the process is carried out at the reflux temperature of the solvent.